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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,738	08/16/2002	Albert John Dzermejko	APV31549	9734

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EXAMINER	
KASTLER, SCOTT R	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 10/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/070,738	Applicant(s) DZERMEJKO ET AL.	
	Examiner Scott Kastler	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3 and 7* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The above claims are indefinite because in both of the above claims, the term "the wall" (in line 1 of each of claim 10 and 11) lacks any antecedent basis in either the instant claim or claim 1 from which these claims depend, thereby rendering the scope of the claims unascertainable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4, 6 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hille et al. Hille et al teaches that in cooling plates for shaft furnaces, it was well known in the art to employ cast in steel tubes in a copper casting as the cooling plate (see col. 1 lines 25-34 for example). Hille et al also teaches, in the embodiments of the figures for example, that cooling plates for shaft furnaces where the plate is equipped with a multiplicity of horizontal ribs (9) which are of a width smaller than the width of the cooling plate itself (see figure 2 for example), where the ribs include supporting backs (the bottom portions of the rib support the upper

portions) and where the ribs thicken towards their free ends (see col. 4 lines 55-65 for example), and that these ribs serve to hold a refractory for protecting the cooling plate, thereby showing all aspects of the above claims except to specifically teach that the ribs are also employed on cooling plates made by casting copper around steel cooling tubes. However, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because improved protection of the cooling plate would also be desirable in the cooling plates disclosed by Hille et al which include cast in steel cooling tubes, and it would have been a modification obvious to one of ordinary skill in the art at the time the invention was made to employ a multiplicity of horizontal ribs, as taught by Hille et al, in the cast copper cooling plate including cast in steel cooling tubes, also taught by Hille et al, in order to improve protection of the cooling plate and thereby increase the service life of the cooling plate.

Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hille et al. As applied to claim 1 above, Hille et al shows all aspects of the above claims except the specifically recited shapes of the horizontal ribs, although the ribs of Hille et al operate in substantially the same manner (by allowing the adhesion of slag or refractory to the cooling plate) for substantially the same purpose (to improve the protection and service life of the cooling plate) as that of the instantly claimed rib configuration. It has been well settled that where, as in the instant case, a prior art component is show to operate in substantially the same manner for substantially the same purpose as claimed, motivation to alter the configuration or shape of the component (in the instant case, the rib configuration) without materially altering the operation of function of the component would have been a modification obvious tom one of ordinary skill in

the art at the time the invention was made. See *In re Dailey*, 149 USPQ 47 and MPEP 2144.04 IV B. In the instant case, absent any showing of new or unexpected results arising therefrom (such as improved refractory or slag retention, or improved resistance to breakage) presented in proper declaration or affidavit form, motivation to alter the configuration or shape of the ribs (9) of Hille et al to any desired shape or configuration, as long as the function (slag or refractory retention) required by Hille et al is maintained, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hille et al, as applied to claims 1 and 5-9 above, in view of the McKoon article, "A COMPARISON OF THE HEAT RANSFER CAPABILITIES OF TWO MANUFACTURING METHODS FOR HIGH HEAT FLUX WATER COOLED DEVICES" hereafter referred to as McKoon or MacRae. As applied to claims 1 and 5-9 above, Hille et al shows all aspects of the above claims except the use of Monel as the material for the cooling pipes. Both of McKoon (pp 46-49) and MacRae (see col.1 lines 50-60 for example, where it is stated that Monel tubes cast into cooper cooling blocks have been known in the art since to 1960's) teach that in water cooled cooling devices where preformed cooling tubes are cast into a copper plate, it was known in the art at the time the invention was made to employ Monel as the material for the cooling tubes and that this combination of Monel tubes and a cast cooper plate is desirable because the higher melting point Monel tubes are lass likely to be melted and/or degraded during the casting of the lower melting point copper plate around the tubes. Because reduction of melting of the cast in tubes would also be desirable in the cooling plate described by Hille et al, motivation to employ Monel as the tube

material, as described by both of McKoon or MacRae, in the copper cooling plate described by Hille et al, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (703) 308-2506. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-3050. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

Scott Kastler
Primary Examiner
Art Unit 1742

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